SEVENTY-FIVE per cent. of a highly valuable fertilizing material in the form of tankage and blood from the country slaughter of food animals is being wasted throughout the country districts, according to a recent bulletin of the Department of Agriculture. Tankage, a product of slaughter houses consisting of such waste material as bones, horns, hoofs, hair, etc., contains a large percentage of nitrogen and other products used in commercial fertilizer and in the larger packing houses is carefully saved. In country killing, however, only 25 per cent. of the tankage and blood are saved for fertilizer. The nitrogen content of tankage is said to vary from 5 to 8 per cent. and its phosphoric acid content between 5 and 12 per cent. Dried blood is perhaps the richest in nitrogen of all the organic materials used in the fertilizing industries. Unadulterated blood when quite dry contains 14 per cent. of nitrogen, but as obtained on the market its content varies from 9 to 13 per cent. From the figures estimated by the Bureau of Animal Industry, Department of Agriculture, as representing the total slaughter of cattle, calves, swine, and sheep in the United States, in 1912, it has been calculated that if all the materials rendered available by this slaughter had been saved and converted into tankage and dried blood, they would have produced 222,535 tons of tankage and 79,794 tons of dried blood. The introduction of a cooperative system among American farmers undoubtedly would result in an increased utilization of blood and tankage for fertilizing purposes. In Denmark country killing is being practised on a cooperative basis in small country abattoirs, and the blood is carefully preserved.

UNIVERSITY AND EDUCATIONAL NEWS

A NEW art building to cost $125,000 is now guaranteed for Oberlin College. The names of the donors are at their request withheld.

MR. F. W. BRADLEY has offered a gift of $1,000 a year for at least ten years to endow a loan fund for students in the college of mining of the University of California. Both principal and income of the gift are to be available for these loans.

HARVARD UNIVERSITY has received the sum of $7,500 with which to establish a scholarship in memory of the late Francis Hardon Burr, '09. This fund is to be known as the Francis H. Burr 1909 Fund, and the yearly income therefrom is to be used in helping deserving undergraduates who combine as nearly as possible Burr's remarkable qualities of character, leadership and athletic ability. The fund was raised principally from the members of Burr's class, but some of his older friends also contributed.

BY the will of the late Miss Emily M. Easton £10,000 are bequeathed to the Durham College of Medicine, Newcastle, and £5,000 to Armstrong College.

THE dedication at the winter convocation of the University of Chicago of the new addition to the Ryerson Physical Laboratory marks a great increase in the research facilities of the university in the field of physics. The new addition is connected with the original building by corridors and consists of a basement and three floors. It contains the liquid air and refrigerating plants, the dynamos and motors, the machine and instrument shops, and the switchboard for distributing electric currents of all kinds to all parts of both buildings. It has besides two large student laboratories, a lecture room and four research rooms. The old Ryerson Laboratory has been renewed by the installation of a modern electric light and power system of unusual completeness, by the insertion of new steel-concrete floors in all the ground-floor rooms, and by the remodeling of the entire basement into a series of special research rooms, of great value where freedom from vibration and constancy of temperature are required.

THE associates of Radcliffe College have elected Miss Bertha May Boody to succeed Miss Mary Coes as dean of the college. Miss Boody is a native of Brookline and received the A.B. degree from Radcliffe in 1899 and the A.M. degree from Columbia in 1912. She has

studied for one winter in the American School for Classical Studies in Rome, and for one summer in the University of Cambridge, England.

PROFESSOR WALTER MULFORD, of Cornell University, has been appointed head of the new department of forestry in the University of California. His duties will begin with August 1 next. Since there are 29,000,000 acres of national forest in California, besides vast areas of forest privately owned, the subject is one of great importance there. Dr. Patrick Beveridge Kennedy has been appointed assistant professor of agronomy. Dr. Calvin O. Esterly has been appointed as a biologist in the Scripps Institution for Biological Research at La Jolla.

MR. J. J. GALLOWAY, Ph.D. (Indiana), has been appointed instructor in geology at Indiana University.

MR. HALBERT P. BYBEE, M.A. (Indiana), has been appointed instructor in geology at the University of Texas.

MR. J. C. JOHNSON has been appointed to the chair of general biology, botany and zoology, at Auckland University College, in succession to Professor A. P. W. Thomas.

DISCUSSION AND CORRESPONDENCE

COLUMBIUM VERSUS NIOBIUM

AT a meeting of the Council of the International Association of Chemical Societies in Brussels, last September, a committee on inorganic nomenclature, among other recommendations, endorsed the name and symbol "niobium" and "Nb," for the element which was originally named columbium. As this recommendation is historically erroneous, a brief statement of the facts appears to be desirable.

In 1801, Hatchett, an English chemist, analyzed a strange American mineral, and in it found a new metallic acid; the oxide of an element which he named columbium. A year later, Ekeberg, in Sweden, analyzed a similar mineral from Finland, and discovered another element, which he called tantalum. Wollaston, in 1809, undertook a new investigation of these elements, and concluded that they were identical; a conclusion which, if it were true, would have involved the rejection of the later name, and the retention of the earlier columbium. The accepted rules of scientific nomenclature make this point clear.

For more than forty years after Hatchett's discovery, both names were in current use; for although Wollaston's views were accepted by many chemists, there were others unconvinced. In 1844, however, Heinrich Rose after an elaborate study of columbite and tantalite from many localities, announced the discovery of two new elements in them, niobium and pelopium. The latter supposed element was afterwards found to be non-existent, but the niobium was merely the old columbium under a new name. That name in some mysterious manner was substituted by the German chemists for the original, appropriate name, and has been in general use in Europe ever since. In America, the name columbium has been generally preferred, and was formally endorsed by the Chemical Section of the American Association for the Advancement of Science more than twenty years ago. In England, also, columbium is much used, as, for example, in Roscoe and Schorlemmer's "Treatise on Chemistry," Thorpe's "Dictionary of Applied Chemistry," and the new edition of the Encyclopedia Britannica.

The foundation of Rose's error seems to have been an uncritical acceptance of Wollaston's views; for he speaks of all the minerals he studied as tantalite. He also, at least in his original memoir, claims that the atomic weight of niobium is greater than that of tantalum, and here he was obviously wrong.

In short, the name columbium has more than forty years priority, and during that interval was accepted by many chemists, and was more or less in current use. To employ the name niobium is not only unhistorical, but it is also unfair to the original discoverer, meaningless, and without any justification whatever. Furthermore, it injures the splendid reputation of Rose, for it perpetuates and emphasizes one of his few errors. The recom-